APPENDIX X - Preparation Guidelines for Project Study Report (Safety Roadside Rest Area)

Project Study Report - Safety Roadside Rest Area Rehabilitation
Project Study Report - New Safety Roadside Rest Area
Project Study Report - Auxiliary Parking Facility
Project Study Report - Safety Roadside Rest Area Closure

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APPENDIX X - Preparation Guidelines for Project Study Report (Safety Roadside Rest Area)

ARTICLE 1 – Overview

Use of Project Study Report

These guidelines are to be used in conjunction with the procedures described in Chapter 29 of the Project Development Procedures Manual for "Safety Roadside Rest Areas". All major Safety Roadside Rest Area (SRRA) projects funded from the 20.XX.201.250 (SRRA Restoration,) or 20.XX.201.260 (New SRRA) program require a Project Study Report (PSR).

The purpose of a PSR is to document the proposed scope, schedule, and estimated cost of the SRRA project so that it can be programmed in the State Highway Operation and Protection Program (SHOPP).

It is important that deviations from mandatory design standards (see Index 82.3 of the *Caltrans Highway Design Manual*) be identified early in the project development process, and that any exceptions be approved prior to PSR approval. Approval of exceptions to mandatory design standards is accomplished via the "Exceptions to Mandatory Design Standard Fact Sheet" process (see Chapter 21 and Appendix BB). Approval of exceptions to mandatory design standards may also be required by the Federal Highway Administration. Approval of exceptions to Advisory Design Standards should be handled in accordance with each District's procedure.

ARTICLE 2 – Item-by-Item Guidelines for PSR-SRRA Outline

Report Format

The PSR-SRRA is prepared and submitted following the Outline provided at the end of this Appendix. The data required is to be provided under the following headings and arranged and numbered in the sequence shown in the Outline. The following headings correspond to specific topics that are to be discussed in the submittal.

Cover Sheet

All PSR-SRRA submittals should have a standard cover sheet to provide project identification information and signatures. Information to be provided includes the following:

- Title
  "Project Study Report - Safety Roadside Rest Area Rehabilitation",
  "Project Study Report - New Safety Roadside Rest Area",
  "Project Study Report - Auxiliary Parking Facility" or
  "Project Study Report - Safety Roadside Rest Area Closure".

- District-County-Route, Kilometer Post {Post Mile} [Dist-Co-Rte, KP {PM})
  The Kilometer Post {Post Mile} should be given to the nearest 0.1 km (mile)

- Responsible Unit (RU)
  The unit source code of the licensed landscape architect or engineer in responsible charge of the technical features of the project.

- Expenditure Authorization (EA)
  The multiphase EA using the "K" phase for the project.

- Program Identification
  Program Identification indicates which program will fund this task/phase of the project. Currently, SRRA projects are funded in the SHOPP. The SHOPP code for the development of PSRs for SRRA Rehabilitation, Auxiliary Parking Facilities and SRRA Closure is 40.50.201.250. For New SRRA's it is 40.50.201.260.

- On Route _____, at the _____ Safety Roadside Rest Area (for SRRA-Rehabilitation or SRRA Closure), or

  On Route _____, From _____ To _____ (for New SRRA's and Auxiliary Parking Facilities).
  Provide a brief written description of the project location.

- Vicinity Map
  Provide a small map showing the project location consistent with the brief description and Kilometer Posts {Post Miles}, and a north arrow. The map should be sufficient to locate the project at a glance for a person unfamiliar with the project. It should show the features used to identify the project limits such as roads, streams, junctions or railroads, and the nearest town (unless too distant), and a note indicating the direction to and name of the next town in each direction.

- Approval Recommended
  The recommendation for approval signed by the Project Manager (PM), the District Landscape Architect, and District Maintenance indicating concurrence with the proposed project scope and cost.

- Approval
  The approval of the PSR-SRRA by the District Director (or by a District Division Chief to whom that authority has been officially delegated) approves the concept for programming.

Licensed Landscape Architect's Stamp and Statement

The second page of the PSR-SRRA contains the required seal or stamp and signature of a licensed landscape architect who is the person in responsible charge of the site features. The sheet must include a statement indicating that the licensed landscape architect attests to the technical information contained herein and the data upon which recommendations, conclusions, and decisions are based. Approval of the PSR-SRRA is a management decision and is separate from this technical signature of the person in responsible charge of the site features.

Registered Civil Engineer's Stamp and Statement

The second page of the PSR-SRRA also contains the required seal or stamp and signature of a registered civil engineer who is the person in responsible charge of the engineering features. The sheet must include a statement indicating that the registered civil engineer attests to the technical information contained herein and the engineering data upon which recommendations, conclusions, and decisions are based. Approval of the PSR-SRRA is a management decision and is separate from this technical signature of the person in responsible charge of the engineering features.

1. INTRODUCTION

Provide a short description of the complete scope of work. Indicate the range of alternatives considered and project cost estimate for the recommended alternative. Include the proposed program year and source of funding.

2a. BACKGROUND (for SRRA Rehabilitation)

- Describe why this project was initiated.
- Indicate the type of highway, access control, climate, seasonal road conditions, and use of rest area by trucks and busses. Describe existing parking capacity for cars and long vehicles.
- Briefly describe the type, age and condition of the comfort station(s) and other major facilities. Describe the condition of the site and amenities (e.g., utilities, ramps, parking, lighting, architecture, walks, and landscape).
- Provide the date of initial construction and any subsequent improvement projects.
- Discuss distances to nearby SRRAs, other stopping opportunities and conformance with the SRRA Master Plan.
- Describe who maintains the rest area and the annual cost.
- Identify and describe the characteristic architectural style of the surrounding community for the purpose of developing alternative studies for the proposed design.
- Describe any commitments made to local officials, private organizations, or other groups or individuals. Describe outside support or opposition.
- Discuss existing or planned vending operations at this SRRA.
- Indicate conformance with SRRA Master Plan and Program priorities.

2b. BACKGROUND (for New SRRA's or Auxiliary Parking Facilities)

- Describe why this project was initiated.
- Discuss distances to nearby SRRA's, other stopping opportunities, and conformance with the SRRA Master Plan.
- Indicate the type of highway, access control, climate and seasonal road conditions.
- Discuss site feasibility including the availability and adequacy of potable water, electrical power and waster water treatment, ingress/egress to the site, and scenic value.
- Identify and describe the characteristic architectural style of the surrounding community for the purpose of developing alternative studies for the proposed design.
- Address the feasibility of development and operational partnerships.

2c. **BACKGROUND** (for SRRA Closure)

- Indicate the type of highway, access control, climate and seasonal road conditions.
- Briefly describe the type, age and condition of the existing rest area facilities including the comfort station(s), utilities, ramps, parking, lighting, walkways and landscape.
- Provide the date of initial construction and any subsequent improvement projects.
- Describe who maintains the rest area and the annual cost.
- Discuss existing vending operations at this SRRA
- Discuss distances to nearby SRRAs, other stopping opportunities and conformance with the SRRA Master Plan.

3. **CAPACITY ANALYSIS** (for SRRA Rehabilitation, New SRRAs and Auxiliary Parking Facilities)

Complete the Basic Design Data Sheet (attached). Part 1 will estimate the current and 20-year usage of the rest area, parking spaces for car and trucks, and comfort station fixtures. Part 2 will estimate the comfort station facilities, water and sewage requirements and should be completed by the Office of Transportation Architecture in DES. Briefly discuss the requirements.

4a. **NEED AND PURPOSE** (for SRRA Rehabilitation)

Identify the problems, needs and/or deficiencies that necessitate this project. Consult with the Office of Transportation Architecture in DES for architectural deficiencies. Supplement, as appropriate, with maps, drawings, charts, tables and/or letters.

Below is a checklist of potential deficiencies to consider:

- Compliance with legal or regulatory requirements (e.g., Americans With Disabilities Act (ADA), Cal-OSHA, health department, Water Quality Control Board) and commitments resulting from environmental compliance.
- Safety and security (safe walks, lighting, signs, CHP facilities, surveillance cameras). Describe contacts with CHP.
- Maintainability and vandalism.
- Parking capacity and geometrics of existing ramps, merge and diverge areas.
- Rest room capacity.
- Accident history for rest area and route segment 15 km {10 miles} in each direction.
- Unauthorized shoulder, roadside, and community parking.
- User amenities including trash bins, picnic tables & shelters, benches, water faucets, restroom fixtures, landscaping, traveler information kiosks, vending and other site amenities.

4b. **NEED AND PURPOSE** (for New SRRA and Auxiliary Parking Facility)

Identify the problems, needs and/or deficiencies that necessitate this project. Supplement, as appropriate, with maps, drawings, charts, tables and/or letters.

Include in your discussion

- Parking deficiencies at adjacent rest areas.
- Unauthorized parking on shoulders, roadsides or in the adjacent community.

- Accident history for route segment 15 km {10 miles} in each direction from the proposed location.
- Physical or environmental limitations on expanding adjacent rest areas.
- Gap in rest area spacing.

4c. **NEED AND PURPOSE** (for SRRA Closure)

Identify the problem, need and justification for closure. Consider the following:

- Mainline and ramp traffic volumes, and vehicle types (automobiles, commercial trucks, busses) for the subject SRRA and the adjacent SRRAs.
- Current and 20-year projected rest area usage (vehicles and number of users).
- Unauthorized parking on shoulders, roadsides or in the adjacent community.
- Accident history for route segment 15 km {10 miles} in each direction from the proposed location.

5a. **ALTERNATIVES** (for SRRA Rehabilitation)

Discuss the project alternatives that will satisfy the need and purpose. Discuss why each alternative is recommended or rejected. If applicable, discuss the reason for rehabilitating the existing comfort station versus demolishing and building a new one. Discuss any agreements with CHP, sheltered workshops, or Department of Rehabilitation for this site. For all alternatives, provide a complete description of the scope of work with sufficient detail to describe the proposed work and how it relates to the purpose and need. Attach maps or schematic drawings as appropriate.

Alternatives for SRRA Rehabilitation projects that may be considered include:

- Correct immediate ADA, Cal-OSHA, health, safety and maintenance needs only.
- Rehabilitate comfort station, core area, maintenance crew room, CHP office (optional) for 20-year need (no parking capacity increase).
- Demolish existing and construct new comfort station, core area, maintenance crew room, CHP office (optional) for 20-year need (no parking capacity increase).
- Rehabilitate entire rest area including geometric improvements for ramps, merge and diverge areas to bring to current Department standards, and parking capacity increases.
- Relocate rest area to another site.
- No build.
- Discussions may include need for additional capacity at either auxiliary parking facility or additional new rest area.
- Discuss distances to nearby SRRAs, other stopping opportunities and conformance with the SRRA Master Plan.

Provide a project cost estimate for each alternative. Break costs down as follows:

- Ramps and parking
- Architectural building features. Contact DES Office of Transportation Architecture to obtain cost information for the building.
- Pedestrian Facilities
- Utilities and utility connection fees.
- Landscaping
- Right of way costs (not included in cost of construction) if applicable
- 25% Contingency
- Other

5b. **ALTERNATIVES** (for New SRRAs and Auxiliary Parking Facility)

Discuss the project alternatives for a Department constructed SRRA that will satisfy the need and purpose. Also discuss conformance with the SRRA Master Plan. If several sites are being studied, consider developing a matrix to show pros and cons of each site. For all alternatives, provide a complete description of the scope of work with sufficient detail to describe the proposed work and how it relates to the purpose and need. Attach maps or schematic drawings as appropriate.

Also discuss the project if it were to be privatized. Describe what privatization efforts have been done so far and what plans the District has. Discuss the range of possible locations.

Provide a project cost estimate for each Department-constructed alternative and cost range for privatized alternative. Break costs down as follows:

- Ramps and parking
- Architectural building features (Estimate will be provided by Rest Area Architect).
- Pedestrian Facilities
- Utilities and utility connection fees
- Landscaping
- Right of way costs
- 25% Contingency
- Other

5c. **ALTERNATIVES** (for SRRA Closure)

Discuss alternatives considered in lieu of closure including: rehabilitation, replacement, relinquishment to other agencies, operation by others, and obliteration. Discuss why each alternative is rejected. Provide a project cost estimate for each alternative. Discuss how closure would impact nearby SRRAs or other stopping opportunities.

6a. **RECOMMENDED ALTERNATIVE** (for SRRA Rehabilitation, New SRRAs and Auxiliary Parking Facilities)

Provide a statement on which proposal is recommended and why, and describe how it will correct the deficiencies. Include appropriate conceptual plans to depict alternatives.

Describe how this proposal conforms to program priorities and performance objectives.

Provide a conceptual site plan depicting this project and the 20-year master plan. The conceptual site plan should include:

- Highway connections, vehicular circulation, and parking.
- Location, orientation and configuration of buildings (rest rooms, storage buildings, CHP drop-in office, crew room, information kiosks, vending machine locations, picnic table shelters, pump houses and dumpster enclosures).
- Pedestrian circulation and activity areas.
- Extent and type of landscape planting.
- Location of leach field and pet area.
- Right of way limits and fencing.
- Permanent Storm water pollution treatment BMPs (if applicable).

Discuss how the proposed architecture is context appropriate and relates to the characteristic architectural styles in the region. Materials used in a project should reflect the character of the area. Discuss community and stakeholder involvement and recommendations.

6b. RECOMMENDED ALTERNATIVE (for SRRA Closure)

Describe the closure proposal.

Describe the impact on the rest area system and environment including:

- Description of resulting distance to, and impact on, adjacent rest areas.
- Availability and capacity of alternate safe, free, 24-hour public stopping opportunities for all vehicle types (differentiate between free, for-fee and customer-only opportunities).
- Consistency with current SRRA Master Plan.
- Description of environmental impacts, mitigation, removal or reuse of rest area site.

Describe the public hearing and stakeholder comments and Department responses. Describe FHWA requirements and concurrence.

7. CONSIDERATIONS REQUIRING DISCUSSION

Hazardous Materials

Discuss whether hazardous materials including Aerially Deposited Lead (ADL), and Naturally Occurring Asbestos (NOA) are present within the project site, including existing buildings, along with any recommended actions for avoidance or mitigation.

Traffic Management Plan (TMP) For SRRA Rehabilitation

Discuss whether the rest area and comfort station building will remain open or be closed during construction. Discuss if there will be temporary facilities and how the temporary facilities will be handled. Discuss how closure will be handled and how the public will be notified if closure is the option.

Storm Water Pollution Prevention

Note that the project will comply with Caltrans Storm Water Quality Handbook Project Planning and Design Guide. A Storm Water Data Report will be completed. Determine a preliminary cost for incorporating permanent design features and temporary controls that will minimize the discharge of contaminated storm water from the right of way.

Environmental Issues and Concerns

Briefly describe any environmental issues and concerns. Describe the type of environmental document or determination for CEQA and NEPA.

8. OTHER CONSIDERATIONS AS APPROPRIATE

- Permits and other approvals required.
- Utility permits and fees for water, wastewater, electrical and gas.
- Consistency with other planning.
- Railroad involvement.
- Cooperative Agreements - Describe cooperative features, participants and responsibilities.

9. PROJECT SUPPORT COSTS

Include estimated PY effort and other capitol outlay support costs for project development and construction from the time the project is initially programmed through the final stages of construction. The proposed schedule should be based upon when the District realistically expects that the project would be programmed, typically in the last two years of the program.

The cost of any specialty contracts or other typical direct project costs, which may be required for the project, should also be estimated by the proposed fiscal year. Do not include costs for PY estimates. The Project Management Program (PMP) will establish average dollar costs per PY for various functions, including salary, benefits, CADD usage, travel and other direct costs. Once a project is about to be programmed, these rates will be applied to the estimated PY effort by PMP to establish the project's support budget.

Proposed Program	**Design PYs**				Engineering Service Center PYs					FY Total	Other Costs
					Structures		METS & Others		Office		
FY	Envir	Design	R/W	Const	Design	Const	Design	Const	Engr	PYs	($)
Total											
Total Estimated Project PYs and Other Support Cost:										PY's	$*

* Note: Dollar value of estimated specialty contracts, etc. to be shown only when applicable

COMMENTS:_____

10. FUNDING/SCHEDULING

Identify the source of funding and proposed project milestone dates. Where appropriate, include time in the project schedule for environmental document and permit review.

11. PROJECT PERSONNEL

List the name and phone numbers (CALNET and public) for the Project Development Team leader, Project Manager, Project Engineer, Architect, Project Landscape Architect, District Landscape Architect, LAP Rest Area Coordinator, LAP District Coordinator, Design Coordinator, Project Development supervisor and senior, Environmental Branch Chief, Right of Way reviewer, FHWA reviewer, Maintenance representative, etc.

12. ATTACHMENTS

- Conceptual Site Plan
- Architectural Building Concept
- Appropriate maps
- Capacity analysis/Design Data Sheet
- Project Cost Estimate
- Storm Water Data Report
- Appropriate correspondence

Dist - Co - Rte, KP {PM}
RU - EA
Program

PROJECT STUDY REPORT
(Safety Roadside Rest Area Rehabilitation)
(New Safety Roadside Rest Area)
(Auxiliary Parking Facility)
(Safety Roadside Rest Area Closure)

Vicinity Map

Show:

- Project limits
- North Arrow

On Route_____

From _____

To _____

APPROVAL RECOMMENDED

_____
PROJECT MANAGER

_____
DISTRICT LANDSCAPE ARCHITECT

_____
DISTRICT MAINTENANCE

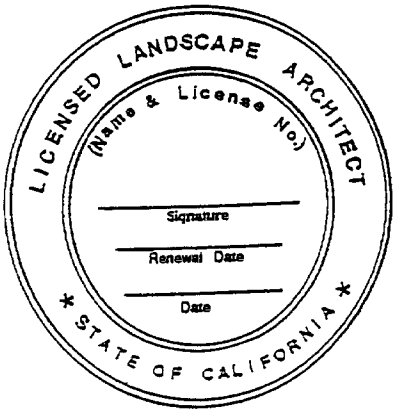
APPROVED:

_____ _____
DISTRICT DIRECTOR *DATE*

Dist - Co - Rte, KP {PM}

This Project Report (Safety Roadside Rest Area) has been prepared under the direction of the following licensed landscape architect. The licensed landscape architect attests to the technical information contained herein and the data upon which recommendations, conclusions, and decisions are based.

LICENSED LANDSCAPE ARCHITECT *DATE*



This Project Report (Safety Roadside Rest Area) has been prepared under the direction of the following registered civil engineer. The registered civil engineer attests to the technical information contained herein and the engineering data upon which recommendations, conclusions, and decisions are based.

REGISTERED CIVIL ENGINEER *DATE*

Basic Design Data Sheet (Part 1)

LOCATION _____
District County Route KP {PM}

SRRA NAME _____ ROUTE DIRECTION _____

Design Data	Current Year	Design Year (20 years)
A. AADT for the Route*	_____	_____
B. Peak Hour ADT for the Route*	_____	_____
C. Ramp Count for SRRA*	_____	_____
D. Stopping Percentage (C/A, above) If AADT for the route is for both directions and the SRRA serves 1 direction, "A" must be divided by 2 first.	_____	_____
E. Rest Area Design Hourly Volume (B x D, above)	_____	_____
F. Length of stay in rest area (20 minutes)	0.33 hour	0.33 hour
G. Total Parking Spaces (E x F, above)****	_____	_____
H. Long Vehicles Percentage**	_____	_____
I. Long Vehicle Parking Spaces (G x H, above)	_____	_____
J. Auto Parking Spaces (G-I, above)	_____	_____
K. Users per Hour (G x 2.2 people/vehicle)	_____	_____
L. Adjustment for Bus Routes***	_____	_____
M. Design Usage per Hour (K + L, above)	_____	_____

* Traffic and ramp counts are available on Traffic Operations web site at http://www.dot.ca.gov/hq/traffops/
** Usually 30%. Adjust as necessary per District traffic recommendation.
*** Up to 10% increase for rest areas on major bus routes.
**** Maximum 120 parking spaces or reasonable carrying capacity of site.

Basic Design Data Sheet (Part 2)

Comfort facilities, domestic water supply, irrigation water requirements should be determined by the sections directly involved in that portion of the work. The estimated demands should be indicated.

Comfort Facilities *(provide name, or example, of section directly involved (as stated in above paragraph) for each requirement & define Ultimate)*

	Design	Ultimate
Water closets and urinals (men)	_____	_____
Lavatories (men)	_____	_____
Water closets (women)	_____	_____
Lavatories (women)	_____	_____

Domestic Water Requirements (Initial Development for water is 100% of Ultimate)
What is the definition Initial Development?

Peak demand	_____ L {gal} / min
Average Daily Demand (storage required)	_____ L {gal}
Peak daily demand	_____ L {gal}

Irrigation Water Requirements (Initial Development is 100% of Ultimate)

Turf area (2 inches per week) (1.25 gal/sq ft/wk))	_____ L {gal}
Trees and shrubs (13 gal / day)	_____ L {gal}
Ground cover (2 inches per week)	_____ L {gal}

Initial Development is 100% of Ultimate

Sewage Disposal Requirements (Initial Development of sewers is 100% of Ultimate)

Daily Flow	_____ L {gal}
Size piping	_____ mm {inches}

Outline for

PROJECT STUDY REPORT

Safety Roadside Rest Area Rehabilitation
New Safety Roadside Rest Area
Auxiliary Parking Facility
Safety Roadside Rest Area Closure

Refer to ARTICLE 2-Item-by-Item Guidelines for PSR-SRRA, located within this Appendix, for further explanation of the data to be provided in each topic outlined below.

1. INTRODUCTION
   - Description of work
   - Alternatives considered
   - Project cost estimate for the recommended alternative
   - Program year and source of funding

2a. BACKGROUND (For SRRA Rehabilitation)
   - Why project was initiated
   - Highway description
   - Condition of facilities
   - Construction history
   - Maintenance
   - Context
   - Commitments
   - Blind vending operations
   - Conformance with SRRA Master Plan

2b. BACKGROUND (For New SRRAs and Auxiliary Parking Facilities)
   - Why project was initiated
   - Conformance with master plan/spacing
   - Highway description
   - Site feasibility
   - Context
   - Opportunities for partnerships

2c. BACKGROUND (SRRA Closure)
   - Highway description
   - Condition of facilities
   - Construction history
   - Maintenance
   - Blind vending operations
   - Distances to nearby SRRAs

3. CAPACITY ANALYSIS (for SRRA Rehabilitation, New SRRAs and Auxiliary Parking Facilities)
   Basic Design Data Sheet

4a. NEED AND PURPOSE (for SRRA Rehabilitation)
   Identify deficiencies. Consider compliance with regulatory requirements, safety & security, maintainability & vandalism, parking capacity, geometrics of existing ramps, merge and diverge areas rest room deficiencies, accident history, unauthorized roadside parking, user amenities.

4b. NEED AND PURPOSE (for New SRRAs and Auxiliary Parking Facilities)
   Parking deficiencies at adjacent rest areas
   Unauthorized roadside parking
   Accident history
   Physical or environmental limitations
   Need to fill in a gap in existing system
   Conformance with SRRA Master Plan

4c. NEED AND PURPOSE (for SRRA Closure)
   Parking deficiencies at adjacent rest areas
   Unauthorized roadside parking
   Accident history
   Physical or environmental limitations
   Need to fill in a gap in existing system
   Conformance with SRRA Master Plan

5a. ALTERNATIVES (for SRRA Rehabilitation Projects)
   Alternatives considered
   Agreements
   Project Cost Estimates

5b. ALTERNATIVES (for New SRRAs and Auxiliary Parking Facilities)
   Department-constructed alternatives
   Matrix of pro’s and con’s
   Privatization efforts
   Project Cost Estimates

5c. ALTERNATIVES (for SRRA Closure)
   Alternatives in lieu of closure
   Project Cost Estimates

6a. RECOMMENDED ALTERNATIVE (for SRRA Rehabilitation, New SRRAs and Auxiliary Parking Facilities)
- Why selected
- Conceptual site plan
- Conformance with program priorities and performance objectives
- Context

6b. RECOMMENDED ALTERNATIVE (for SRRA Closure)
- Proposal description
- Impact on SRRA System and environment
- Public hearing comments

7. CONSIDERATIONS REQUIRING DISCUSSION
- Hazardous Materials
- Traffic Management Plan
- NPDES Permit Requirements and Storm Water Pollution Prevention
- Environmental Issues

8. OTHER CONSIDERATIONS AS APPROPRIATE

9. PROJECT SUPPORT COSTS

10. FUNDING/SCHEDULING

11. PROJECT PERSONNEL

12. ATTACHMENTS
- Conceptual Site Plan
- Architectural Building Concept Plan
- Appropriate maps
- Capacity analysis/Design Data Sheet
- Project Cost Estimate
- Storm Water Data Report
- Appropriate correspondence